LDWSF 0582-137 Environmental
0541-105 Sampling + Summary
06/15/2006

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

June 15, 2006

Reply to
Attn of: AWT-121

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Peter Jewitt
Farallon Consulting L.L.C.
320 Third Avenue, N.E., Suite 200
Issaquah, WA 98027

William S. Johnson
Earle M. Jorgensen Company
10650 South Alameda
Lynwood, CA 90262

Re: Jorgensen Forge Facility
Administrative Order on Consent, U.S. EPA Docket No CERCLA 10-2003-0111
Approval of Final Investigation Data Summary Report and
Request for an Engineering Evaluation/Cost Analysis (EE/CA)

Dear Mr. Jewitt and Mr. Johnson:

The U.S. Environmental Protection Agency Region 10 (EPA) has reviewed the document entitled *Final Investigation Data Summary Report* (Data Summary Report) dated February 13, 2006. In accordance with Paragraph 29 of the above-referenced Administrative Order on Consent (AOC), EPA approves the Data Summary Report.

EPA appreciates the efforts of Jorgensen Forge and the Earle M. Jorgensen Company with the investigative studies to date at the Jorgensen Forge facility. Based on the results of analyses of bank and sediment samples conducted as part of the Jorgensen Forge investigative studies, EPA will be requiring cleanup of portions of the Jorgensen Forge bank and adjacent sediment. In order to continue with the agreed-upon approach to the cleanup, EPA requests that Earle M. Jorgensen complete an Engineering Evaluation/Cost Analysis (EE/CA) and associated work under the existing AOC for a future non-time-critical removal action for contaminated bank material and sediment. A proposed amendment to the Statement of Work (SOW) to incorporate this additional work is enclosed with this letter.

Please respond in writing to this request to amend the SOW and conduct the EE/CA within 30-days of receipt of this letter.

If you have any questions, please call me at (206)553-2851 or I can be reached by email at Orlean.Howard@epa.gov.

Sincerely,

Howard Orlean
Project Manager

cc: Ron Altier, Jorgensen Forge Corporation
David Templeton, Anchor Environmental
Brad Helland, Ecology, NWRO
Marla Steinhoff, NOAA
Glen St. Amant, Muckleshoot Tribe

bcc: Kris Flint, ECL-111

DRAFT AMENDMENT TO STATEMENT OF WORK

REMOVAL ACTION DUWAMISH WATERWAY BANK AND SEDIMENT
JORGENSEN FORGE SITE

I. PURPOSE

The purpose of this Amendment to the Statement of Work (SOW Amendment) is to add additional tasks to the Administrative Order on Consent for investigation of the sediment and bank adjacent to the Jorgensen Forge site (Site).

The Work to be completed under this SOW Amendment shall include preparation and delivery of the following:

1. Engineering Evaluation/Cost Analysis (EE/CA) Work Plan (draft and final);
2. Removal Action Area Characterization Report (draft and final);
3. Engineering Evaluation/Cost Analysis (EE/CA) Report (draft and final);
4. Biological Assessment (BA) and Clean Water Act (CWA) Section 404 Analysis Memorandum;

These activities shall be completed in accordance with the Administrative Order on Consent (AOC), U.S. EPA Docket No. CERCLA-10-2003-0111, to which it is attached, the SOW attached thereto, and this SOW Amendment, including the schedule in Table 1.

II. WORK TO BE PERFORMED BY RESPONDENT

Deliverables specified in this SOW Amendment shall be consistent with "EPA's Guidance on Conducting Non-Time-Critical Removal Actions under CERCLA" (EPA/540/R-93/057, OSWER 9360.0-32).

Respondent shall notify EPA not less than 14 days in advance of any sample collection activity conducted under this SOW Amendment, unless shorter notice is agreed to by EPA.

Respondent shall complete the following tasks:

1. Engineering Evaluation/Cost Analysis (EE/CA) Work Plan

Respondent shall submit an EE/CA Work Plan that will include a summary of existing information, a Project Work Plan, a Sampling and Analysis Plan (SAP) and a Health and Safety Plan (HASP).

The EE/CA Work Plan shall include, at a minimum, the following information:

- Introduction/Purpose;

- Brief description of sediment and bank removal area characteristics, including ecological and physical characteristics;

- Summary of existing information on upstream and upland contamination sources that have the potential to contaminate sediment adjacent to the Site, including a description of environmental investigations, environmental cleanups and planned upland source control measures that will be conducted under agreements with the Washington Department of Ecology as the lead agency;

- Summary of results from sediment sampling adjacent to the Site conducted to date by all parties;

- A description of the analysis to be conducted to determine the likelihood of post Removal Action recontamination of the Jorgensen Forge Removal Action Area by upland or upstream sources of contamination;

- Identification of Removal Action Objectives (RAOs), potential Applicable or Relevant and Appropriate Requirements (ARARs), and other regulatory criteria To Be Considered (TBCs) for the Jorgensen Forge Removal Action Area, in consultation with State of Washington and other partners on the Removal Action;

- A description of the analysis to be conducted to determine disposal facility options for contaminated sediment and bank materials; and

- Other information (including maps and figures) necessary to gain a general understanding of the Jorgensen Forge Removal Action Area.
  Respondent shall also identify data gaps that will be filled by the collection and analysis of field data. Investigation activities will focus on problem definition and will result in data of adequate quality and technical content to evaluate the following:

  • Nature, extent, and volume of sediment and bank contamination;

  • Potential human health and ecological risks resulting from sediment and bank contamination;

  • Engineering characteristics of the Removal Action Area including sediment consistency, dredgeability, potential slope stability issues related to dredging, and potential sediment consolidation issues associated with capping;

  • Potential water quality effects associated with dredging, piling removal, sheet pile installation, capping, or disposal technologies;

  • Alternative technologies for sediment remediation including capping, dredging, treatment (not including treatability testing, which is reserved and may be

performed later, if needed) and disposal (on-Site and off-Site); and

• Potential impacts to threatened or endangered species, other biological receptors, and the potential habitat benefits and impacts of the removal action and related disposal.

The procedures Respondent plans to implement when conducting all field activities will be detailed in the SAP that will be included in the EE/CA Work Plan. The SAP will ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that data meet data quality objectives. The SAP provides a mechanism for planning field activities and consists of a Field Sampling Plan (FSP) and a Quality Assurance Project Plan (QAPP). Details are provided in Section III of this SOW Amendment.

Respondent shall also prepare a HASP that is designed to protect personnel from physical, chemical and other hazards posed by field sampling efforts. Details are set forth in Section III of this SOW Amendment.

Respondent shall continue to work under Ecology supervision on source control efforts related to the Jorgensen Forge Removal Action Area, which may include source identification, source prioritization, documentation and tracking of source control plans and completed source control actions, evaluating and documenting effectiveness of source control measures, and providing input to EPA and Ecology decisions as to the effectiveness of source control in order to implement the Removal Action. The goal is for significant ongoing sources to be controlled to the greatest extent practicable before or during Removal Action implementation such that significant post Removal Action recontamination is not predicted.

2. Removal Action Area Characterization Report

Respondent shall submit a Removal Action Area Characterization Report that includes information from field sampling events, including validated analytical results. The Removal Action Area Characterization Report shall include, at a minimum, the following sections:

- Introduction/Purpose;

- Summary of the field sampling effort that, at a minimum, includes sampling vessel information, field effort dates, a summary of the sample collection effort (e.g., surface sediment, subsurface sediment, and surface water samples), field sample observations (e.g., sediment and descriptions), and a summary of sample and station locations –including station depths (corrected to mean lower low water), station locations (latitudes/longitudes and state plane coordinates), maps and figures;

- Deviations from the FSP;

- Summary of sample handling and shipment; and

- Summary of all data, including a data validation report. Data from this effort shall be provided electronically in a format consistent with other data already provided under previous studies.

Respondent shall submit the data validation report to EPA within 5 days of Respondent's receipt of the data validation report from its contractor or in-house source. Information necessary for EPA to perform an independent review of the validated data shall also be provided.

3. Engineering Evaluation/Cost Analysis (EE/CA) Report

Based on data obtained in the previous sampling efforts and work to be performed under this SOW Amendment, and in consideration of EPA's guidance for removal actions, Respondent will prepare a technical briefing for EPA on the proposed removal alternatives that will be presented by Respondent in the EE/CA.

After the technical briefing, Respondent, in consideration of comments received at the technical briefing, will submit a first draft of the EE/CA.

The first draft EE/CA will be revised in response to EPA comments. A second draft EE/CA shall be submitted to EPA for release for a formal public comment period, following EPA approval or approval with modification, if necessary. If requested by EPA, a final version of the EE/CA shall be submitted to EPA for review and approval in accordance with the schedule set forth in Table 1 of this SOW Amendment.

The EE/CA will contain the following sections:

- Executive Summary;

- Introduction;

- Removal Action Area Characterization;

- The result of the analysis regarding the post Removal Action recontamination potential of the Jorgensen Forge Removal Action Area by upland or upstream sources of contamination, including whether source control actions will be sufficient or if additional actions may be required to control potential sources of significant recontamination;

- Identification of Removal Action Objectives;

- Identification and Analysis of Removal Action Technologies;

- Identification and Analysis of Removal Action Alternatives, including the

identification and analysis of disposal facility options and cost estimates for each alternative.

- Comparative Analysis of Removal Action Alternatives;

- Recommended Removal Action Alternative, including the selection of any needed disposal facility;

- An assessment of the residual risk anticipated after Removal Action implementation;

- Schedule for recommended Removal Action; and

- Preliminary drafts of the Biological Assessment and Clean Water Act analysis memorandum for the recommended Removal Action alternative (see Section 4 below).

A public comment period of at least thirty (30) days is required for the EE/CA and any supporting documentation. Respondent shall assist EPA, as requested, before and during the comment period with its community relations activities concerning the EE/CA. Respondent shall also assist EPA in compiling the Administrative Record before and during the public comment period. If, based on public comments received, EPA determines additional data or analyses are required to complete the EE/CA, Respondent shall collect such data, or perform such analyses, as determined necessary by EPA.

4. Biological Assessment (BA) and Clean Water Act (CWA) Section 404 Analysis Memorandum

In order to identify the presence of threatened, endangered, proposed or candidate species, or their habitat, within the vicinity of the proposed Jorgensen Forge Removal Action Area, Respondent will prepare, for EPA approval, a draft BA to support compliance with the substantive requirements of the Endangered Species Act. The draft BA will characterize baseline conditions of existing habitat; address potential project impacts that the Removal Action may have on these species, their habitat, and their food stocks; and describe best management practices and conservation measures designed to avoid or minimize any negative impacts.

If dredging, capping, or other filling is a component of any of the alternatives, Respondent shall submit a draft memorandum that provides sufficient information to demonstrate compliance with the substantive requirements of Section 404(b) (1) of the CWA. The memorandum shall document the information gathered regarding practicability and cost, long- and short-term impacts from all proposed alternatives, minimization of adverse effects, and an analysis of the need for any mitigation.

5. Community Involvement Activities

If requested by EPA, Respondent shall provide information supporting EPA's community involvement programs related to the Work performed pursuant to this SOW Amendment, and shall participate in public meetings which may be held or sponsored by EPA to explain activities at the Removal Action Area or concerning Work performed pursuant to this SOW Amendment.

III. CONTENT OF SUPPORTING PLANS

1. Sampling and Analysis Plan

Respondent shall develop a project-specific SAP comprising an Field Sampling Plan (FSP) and a project specific QAPP for sample analysis and data handling for samples collected at the Removal Action Area. The SAP shall be based upon the AOC, this SOW Amendment and EPA guidance.

The FSP will define in detail the sampling and data-gathering methods that will be used on the project. It will include sampling objectives, a detailed description of sampling activities, sample locations, sample analysis, sampling equipment and procedures, sampling schedule, station positioning, and sample handling (e.g., sample containers and labels, sample preservation). The SAP will be prepared in accordance with "Methods for Collection, Storage and Manipulation of Sediments for Chemical and Toxicological Analyses: Technical Manual" (EPA/823/B-01-002, October 2001). The content of the SAP shall include the type of information described in EPA's Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (EPA/540/G-89-004).

The QAPP will describe the quality assurance and quality control protocols necessary to achieve required data quality objectives. The QAPP will be prepared in accordance with "EPA Requirements for Quality Assurance Project Plans (QA/R-5)" (EPA/240/B-01/003, March 2001) and "Guidance on Quality Assurance Project Plans (QA/G-5)" (EPA/600/R-98/018, February 1998). The QAPP will address sampling procedures, sample custody, analytical procedures, and data reduction, validation, reporting, and personnel qualifications. The laboratory performing the work must have and follow an approved Quality Assurance (QA) program, which complies with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01-002, March 2001) or equivalent documentation as determined by EPA. If a laboratory not in the EPA Contract Laboratory Program (CLP) is selected, the QAPP shall be consistent with the requirements of the CLP for laboratories proposed outside the CLP. Respondent will provide assurances that EPA has access to laboratory personnel, equipment and records for sample collection, transportation, and analysis.

All sampling and analyses performed pursuant to this SOW Amendment shall conform to EPA direction, approval, and guidance regarding sampling, quality assurance/quality control (QA/QC), data validation, and chain-of-custody procedures. Respondent shall ensure that the laboratory used to perform the analyses participates in a QA/QC program

that complies with the appropriate EPA guidance.

Upon request by EPA, Respondent shall have the laboratory analyze samples submitted by EPA for quality-assurance monitoring. Respondent agrees that EPA personnel may audit any laboratory that performs analytical work under this SOW Amendment. Prior to awarding any work to an analytical laboratory, Respondent will inform the laboratory that an audit may be performed, and the laboratory must agree to coordinate with EPA prior to performing analyses.

Respondent shall provide to EPA the quality assurance/quality control procedures followed by all sampling teams and laboratories performing data collection and/or analysis.

2. Health and Safety Plan(s)

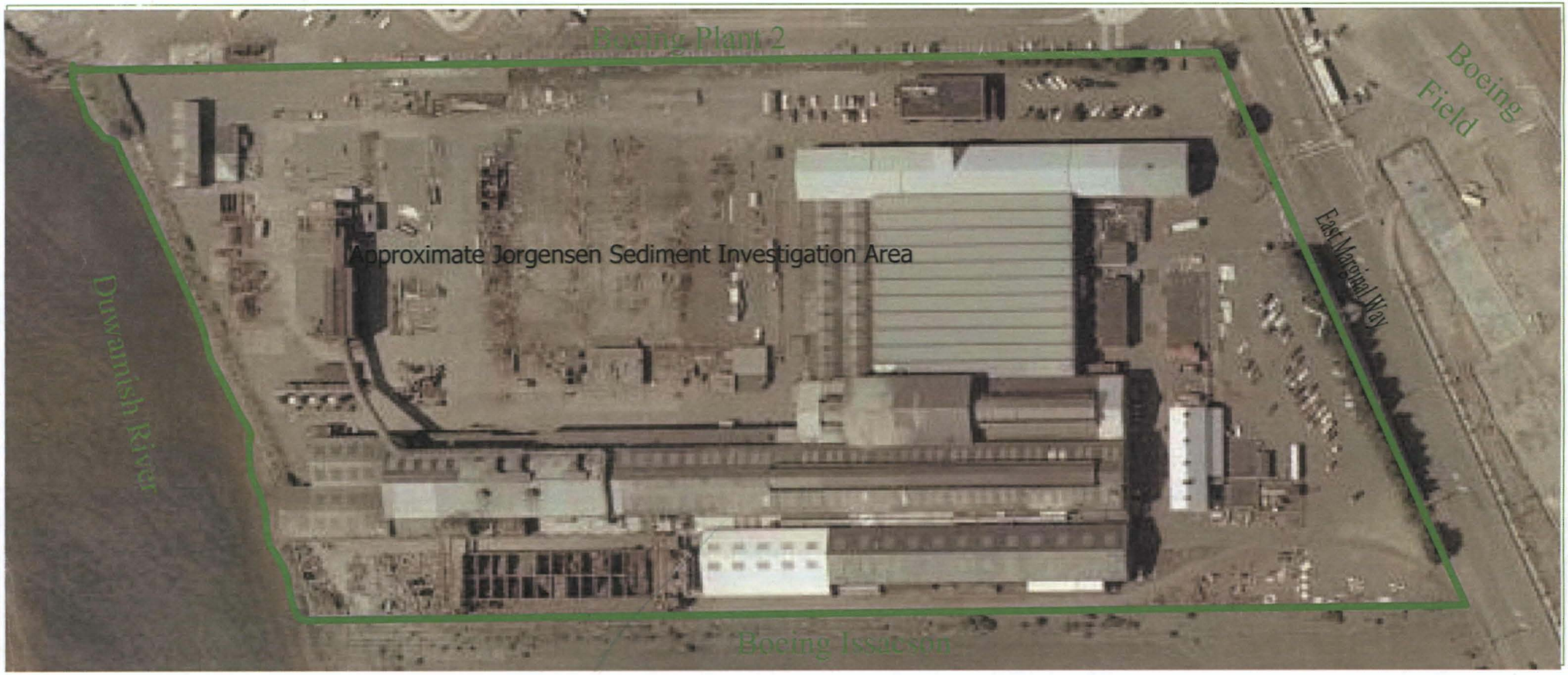
The HASP(s) ensures protection of health and safety during the performance of work under the AOC and this SOW Amendment. The HASP shall be prepared in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992). In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration regulations found at 29 C.F.R. Part 1910. Respondent shall incorporate all changes to the plan recommended by EPA and shall implement the plan during the Removal Action.

IV. SUMMARY OF MAJOR DELIVERABLES/SCHEDULE

The schedule for submission to EPA of deliverables described in this SOW Amendment is presented in Table 1.

TABLE 1 – Schedule of Project Deliverables

Engineering Evaluation/Cost Analysis (EE/CA) Work Plan		
	Draft EE/CA Work Plan	Within 60 days after effective date of SOW Amendment
	Final EE/CA Work Plan	Within 30 days after receipt of EPA comments on draft
Removal Action Area Characterization Report		
	Draft Removal Action Area Characterization Report	Within 90 days after EPA approval of the EE/CA Work Plan
	Final Removal Action Area Characterization Report	Within 30 days after receipt of EPA comment on draft Report
Engineering Evaluation/Cost Analysis (EE/CA) Report		
	First Draft EE/CA	Within 60 days after EPA approval of Final Removal Action Area Characterization Report
	Technical Briefing on Proposed Removal Alternatives	Within 30 days after submittal of the First Draft EE/CA
	Second Draft (Public Review) EE/CA	Within 30 days after receipt of EPA comments on First Draft EE/CA
	Final EE/CA	Within 30 days after receipt of EPA comments on Second Draft EE/CA
Biological Assessment and CWA Section 404 Memorandum		
	Draft Biological Assessment and CWA Section 404 Memorandum	Within 90 after EPA issuance of the Removal Action Memorandum
	Revised Draft Biological Assessment and CWA Section 404 Memorandum	Within 30 days after EPA comments on Draft Biological Assessment and CWA Section 404 Memorandum


Boeing Plant 2
Boeing Field
Approximate Jorgensen Sediment Investigation Area
East Marginal Way
Duwamish River
Boeing Isaacson

STATEMENT OF WORK

This Statement of Work (SOW) defines the work to be completed for the Source Control Investigation of the Jorgensen Forge Corporation (Jorgensen Forge) property located at 8531 East Marginal Way South in Seattle, Washington (the Jorgensen Property). The purpose of the Source Control Investigation is to determine whether the Jorgensen Property is an on-going source of contamination to sediments in the Lower Duwamish Waterway (LDW) adjacent to the Jorgensen Property. The results of the Source Control Investigation will be used to evaluate, select, and implement effective measures to prevent and/or control sources of contamination potentially migrating from the Jorgensen Property to the LDW. The Source Control Investigation will be conducted under Agreed Order No. (pending) with the Washington State Department of Ecology (Ecology) and in accordance with the Ecology Lower Duwamish Source Control Strategy dated January 2004 (Ecology Publication No. 04-09-043).

The Source Control Investigation will be conducted in coordination with the interagency Ecology and U.S. Environmental Protection Agency (EPA) Source Control Team whose primary goal is to prevent recontamination of sediments in the LDW that are to be remediated to meet the Ecology Sediment Management Standards (SMS; Washington Administrative Code [WAC] 173-204) criteria and pending LDW sediment cleanup goals. To help meet this goal, the Source control Investigation will evaluate whether source material is migrating from the Sediment Investigation Area to the LDW sediments, that could cause a violation of SMS (WAC 173-204) criteria. Identified source control measures, if any, necessary to prevent potential recontamination of LDW sediments will be implemented at the Jorgensen Property to the extent practicable under a separate Agreed Order prior to conducting sediment remediation adjacent to the Jorgensen Property under the EPA LDW Superfund process.

The Source Control Investigation will define the chemicals that have been, or are currently, used on the Jorgensen Property or have been found on the Jorgensen Property, and that have migrated from or have the potential to migrate from the Jorgensen Property to LDW sediments and result in sediment concentrations in exceedence of the Ecology SMS (WAC 173-204) criteria and pending LDW sediment cleanup goals. Soil, groundwater, surface water, or other contamination issues that do not have the potential to migrate from the Jorgensen Property and result in exceedences of applicable sediment cleanup goals will generally not be the focus of the Source Control Investigation. The LDW is currently 303(d) listed as an impaired water body based upon sediment quality exceedences for the following chemicals of concern: polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons, phthalates, and mercury and various other metals (Ecology 1998).

WORK TO BE PERFORMED

The Source Control Investigation includes conducting a source control evaluation of existing data and, if necessary, conducting additional investigation to fill identified data gaps necessary to adequately document the status of source control from the Jorgensen Property to the LDW sediments. The SOW to complete the Source Control Investigation is outlined in the tasks below.

TASK 1 — SOURCE CONTROL EVALUATION

For the purposes of this SOW, the Source Control Investigation activities will be limited to an area defined as the Sediment Investigation Area. The Sediment Investigation Area is approximately located within the Jorgenson Property, as defined in the Agreed Order. The Sediment Investigation Area also includes and is further defined by the extent of hazardous substance contamination at or originating from the Jorgenson Property that is currently migrating, or may have the potential to migrate, to the LDW sediments and is resulting in, or could result in, violations of the Ecology Sediment Management Standards (Ch. 173-204 WAC) criteria and pending LDW sediment cleanup goals. The Sediment Investigation Area is illustrated on Exhibit A to the Agreed Order. Task 1 of the Source Control Investigation will consist of compiling and evaluating currently available information, as appropriate and necessary, to document sources of contamination and contaminants of concern within the Sediment Investigation Area, originating either from current or historical operations on the Jorgensen Property or as a result of operations from adjacent properties, and that have migrated from or have the potential to migrate from the Jorgensen Property to the LDW sediments and result in exceedences of the Ecology SMS (WAC 173-204) criteria and pending LDW sediment cleanup goals.

The source control evaluation will integrate the findings presented in the Investigation Data Summary Report (Farallon and Anchor 2006) completed under an Administrative Order on Consent with EPA (Docket No. CERCLA 10-2003-0111) and historical Property investigations conducted by others. The source control evaluation will compile information on current and former chemical uses at the Jorgensen Property and the analytical results for all media sampled on the Jorgensen Property that have migrated to or have the potential to migrate to the LDW sediments. If data gaps are identified that are necessary to document source control from the Jorgensen Property to the LDW sediments, Task 1 will identify additional investigation activities (see Task 2) that are necessary to fill the identified data gaps.

Task 1 of the Source Control Investigation will include the following:

Property Description and History

- Definition of historic and current Property operations

- Identification of chemicals used in current and former operations at the Jorgensen Property
- Identification of current and historical upland structures
- Identification of potentially contaminated upland media that have migrated to or have the potential to migrate to the LDW sediments
- Identification of best management practices or other measures currently implemented at the Jorgensen Property that prevent or minimize contaminant migration from the Sediment Investigation Area to the LDW sediments
- Identification of complete, or potentially complete, contaminant migration pathways from upland sources to the LDW sediments adjacent to the Jorgensen Property

Regulatory History

- Description of Property regulatory history including:
    - Regulated tanks (above and below ground)
    - Hazardous waste and chemical management practices
        - Resource conservation and recovery act generator status
        - Chemical storage areas
        - Containment
        - Inspections
        - Reporting
    - Permits
- Violations
- Complaints/spills
- Spill response
- Cleanup status

Chemical Releases:

- Description of all known chemical releases from the Jorgensen Property and adjacent properties that have migrated to or have the potential to migrate to the LDW sediments

- Summarization of previous investigations and cleanups conducted on the Jorgensen Property

Source Evaluation

- Description of the nature and extent of chemicals in soil, groundwater, and surface water on the Jorgensen Property that have migrated to or have the potential to migrate to the LDW sediments

- Summarization of analytical results for media that have the potential to migrate from the Sediment Investigation Area to the LDW sediments and comparison of these results to applicable cleanup standards/goals

- Summarization of sources of contamination migrating onto the Jorgensen Property from adjacent properties that have migrated to or have the potential to further migrate to the LDW sediments

Pathway Evaluation

Task 1 of the Source Control Investigation will utilize existing environmental data to evaluate potential pathways for chemicals released or used on the Jorgensen Property or that have migrated onto the Jorgensen Property from adjacent properties to reach sediment in the LDW adjacent to the Jorgensen Property. The pathway analysis will include evaluation of the following potential migration pathways to the LDW sediments:

- Direct discharge via effluent

- Stormwater discharge

- Groundwater

- Erosion/leaching

- Spills, dumping, leaks, housekeeping, and management practices

- Airborne migration

Figures will be included as needed to support the source control evaluation process. These figures may include, but not be limited to, the following:

- Property location map

- Current and historical upland contaminant sources

- Sample locations for all environmental media

- Contaminant distribution

- Geologic cross sections
- Groundwater elevation and contour maps

Identification of Data Gaps

The source control evaluation will identify data gaps in the existing Property data which are necessary to support the evaluation of known or suspected sources of contamination on the Jorgensen Property and/or potential pathways for contaminant migration from the Sediment Investigation Area to the LDW sediments. A scope of work will be developed to collect additional data, if necessary, to address any identified data gaps.

Source Control Evaluation Report

The results of the Task 1 source control evaluation will be summarized in a Source Control Evaluation Report. The Source Control Evaluation Report will summarize the results of the source control evaluation including chemicals used on the Jorgensen Property, sources of contamination on the Jorgensen Property due to current or historical Property operations and due to operations from adjacent property operations that have migrated to or have the potential to migrate to the LDW sediments, migration pathway analysis, and the status of existing source control to the LDW sediments from the Jorgensen Property. The Source Control Evaluation Report will include a discussion of data gaps, if any, in the existing Property data that limit the determination of sources of contamination at the Jorgensen Property that could migrate from the Sediment Investigation Area to the LDW sediments and result in exceedences of the Ecology SMS (WAC 173-204) criteria and pending LDW sediment cleanup goals. If necessary, a scope of work to collect sufficient data to fill the identified data gaps and fully evaluate source control at the Jorgensen Property will be included in the Source Control Evaluation Report.

TASK 2 –ADDITIONAL INVESTIGATION, IF NECESSARY

If data gaps are identified during the Task 1 source control evaluation process, additional investigation will be performed at the Jorgensen Property, as necessary to fill the identified data gaps. The detailed scope of work for the additional investigation will be described in a Sampling and Analysis Plan (SAP), Quality Assurance Project Plan (QAPP), and a Health and Safety Plan (HASP). Each of these supporting plans will be submitted as an appendix to the Source Control Evaluation Report for Ecology review and approval. The content of each of these plans is further described below.

Sampling and Analysis Plan

The SAP shall be prepared in accordance with WAC 173-340-820 and will describe the sampling objectives, the rationale for the sampling approach (based upon the identified

data gaps) and plans for data use, and shall provide a detailed description of sampling tasks. The SAP shall describe specifications for sample identifiers; sampling equipment, the type, number, and location of samples to be collected; the analyses to be performed; descriptions of sampling equipment and methods to be used; sample documentation; sample containers, collection and handling; and, schedule. The plan shall provide 14 days advanced notice to Ecology prior to sampling initiation. Ecology may obtain split samples, if practicable. New data generated under this SAP will be entered in Ecology's Environmental Information Management System (EIM).

Quality Assurance Project Plan

A QAPP will be prepared in accordance with the *Guidance for Preparation of Quality Assurance Project Plans*, EPA Region 10, Quality Data Management Program, QA/R-5 and requirements of the EPA Contract Laboratory Program. The QAPP will also follow Ecology's Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies (July 2004). Laboratories will meet the accreditation standards established in WAC Chapter 173-50. Data quality objectives will reflect the criteria or threshold values used for the source control evaluation.

Health and Safety Plan

A HASP will be prepared consistent with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Occupational Safety and Health Administration (OSHA), and the Washington Safety and Health Administration (WSHA). The HASP shall identify specific monitoring and management responsibilities and activities to ensure the protection of human health and to promote safety for the activities associated with investigation sampling. The HASP shall be modified as necessary to reflect changes or revisions to the SAP and QAPP based on agency comments.

TASK 3 – SOURCE CONTROL EVALUATION ADDENDUM REPORT

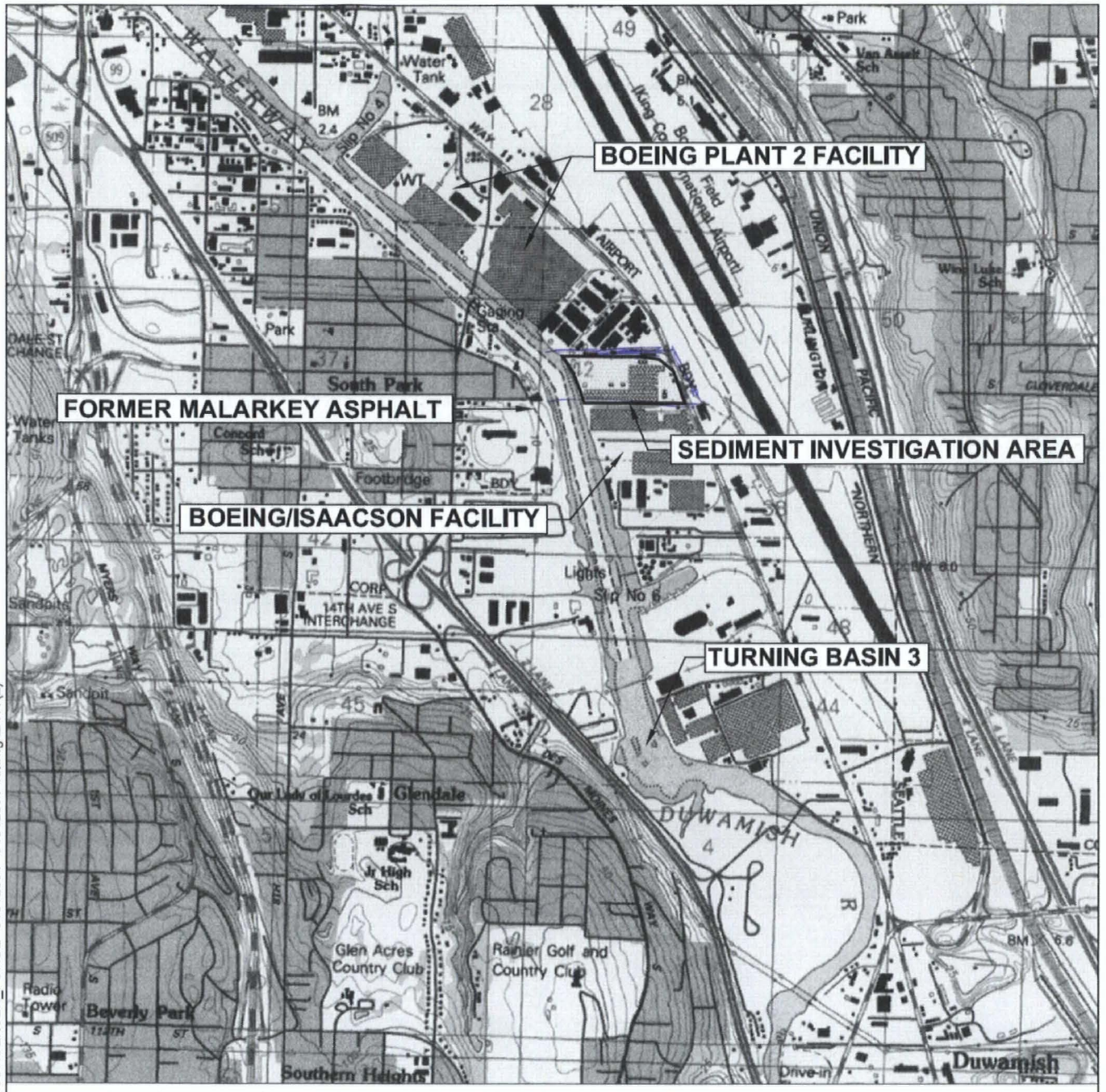
The results of any additional investigation conducted to fill identified data gaps during Task 2 will be summarized in a Source Control Addendum Report. This report will include the following:

- Summary of field activities and methods including a discussion of any deviations from the Ecology-approved field sampling plans and the effect of such changes upon data usability
- Field log forms for the additional investigation
- Laboratory analytical and data validation reports
- Quality assurance analytical results for samples collected during the additional investigation

- Re-evaluation of migration pathway analysis using the additional investigation findings and documentation of the source control status

SCHEDULE OF DELIVERABLES AND NOTIFICATIONS

The schedule for notifications to Ecology or submission of major deliverables to Ecology for this SOW is described below. If the date for submission of any item or notification required by this SOW occurs on a weekend, state or federal holiday, the date for submission of that item or notification is extended to the next business day following the weekend or holiday. Where a deliverable due date is triggered by Ecology notification, comments or approval, the starting date for the period shown is the date Jorgensen Forge received such notification, comments or approval by certified mail, return receipt requested, unless otherwise noted below. Where triggered by Ecology receipt of a deliverable, the starting date for the period shown is the date Ecology receives the deliverable by certified mail, return receipt requested, or the date of Ecology signature on a hand-delivery form.



Note: Base map prepared from USGS 7.5 minute quadrangle map of Seattle South, WA, dated 1983.

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Scale in Feet

Sep 28, 2006 3:55pm hlevasseur K: Jobs 010128-JORGENSEN_FORGE 010128O1 010128O1-13.dwg EX-A (2)

ANCHOR ENVIRONMENTAL, L.L.C.

EXHIBIT A

Sediment Investigation Area (Approximate)
Jorgensen Forge Corporation